

**Notice of Allowability**

Application No.

09/662,194

Examiner

Frank Duong

Applicant(s)

BENSON ET AL.

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to communications dated 12/05/05.
2. ☒ The allowed claim(s) is/are 1, 3-11, 13-17, 19-42, 44-52, 54-97 (now 1-91, accordingly).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
**FRANK DUONG**  
**PRIMARY EXAMINER**

### **DETAILED ACTION**

1. This Office Action is a response to communications dated 12/05/05. Claims 1, 3-11, 13-17, 19-42, 44-52 and 54-97 are pending in the application.

#### ***Allowable Subject Matter***

2. Claims 1, 3-11, 13-17, 19-42, 44-52 and 54-97 are allowed.
3. The following is an examiner's statement of reasons for allowance:

The prior art of record, considered individually or in combination considered in view of the Applicants' Remarks in the response filed 12/05/05, fails to fairly show or suggest the claimed method/apparatus/computer program, comprising, among other thing, a novel and unobvious limitations of:

*"allocating bandwidth to uncommitted data traffic flows using a weighted maximum/minimum process, wherein the weighted maximum/minimum process allocates bandwidth to the uncommitted data traffic flows in proportion to a weight associated with each uncommitted data traffic flow, and the weight corresponding to an amount of bandwidth needed by the uncommitted data traffic flow and determined based on a delay and an average rate requirement for each uncommitted data traffic flow", structurally and functionally interconnected with other limitations in a manner as recited in claims 1, 3-6, 17, 19-42, 44-47, 58-82, 87-89 and 93-96.*

*"increasing an amount of bandwidth to all remaining data flows passing through the network device in proportion to weights of the remaining data flows, wherein the weight corresponding to an amount of bandwidth needed by an uncommitted data traffic flow",*

structurally and functionally interconnected with other limitations in a manner as recited in claims 7-10, 48-51 and 90.

*"distributing remaining bandwidth to remaining data flows using a weighted maximum/minimum process, wherein the weighted maximum/minimum process allocates bandwidth to the remaining data flows in proportion to a weight associated with each remaining data flow, and the weight corresponding to an amount of bandwidth needed by a data flow and being determined based on a delay and an average rate requirement for each remaining data flow"*, structurally and functionally interconnected with other limitations in a manner as recited in claims 11, 13-14, 52, 54-55 and 91.

*"allocating bandwidth to the data flows in accordance with the character of the data flows, wherein the bandwidth is allocated to data flows according to which data flows have a highest probability of using the bandwidth"*, structurally and functionally interconnected with other limitations in a manner as recited in claims 15-16, 56-57 and 92.

*"allocating bandwidth in the network device to uncommitted data traffic flows based on the amount of bandwidth that was used during the previous data traffic flow transfer"*, structurally and functionally interconnected with other limitations in a manner as recited in claims 83-86 and 97.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Henrion et al (USP 6,469,982).

Fan et al (USP 6,408,005).

Fan et al (USP 6,324,165).

Prabhakar et al, Multicast Scheduling for Input-queued Switches, IEEE, pages 855-866, 1997.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is 571-272-3164. The examiner can normally be reached on 7:00AM-3:30PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read "Frank Duong". The signature is fluid and cursive, with the first name "Frank" and last name "Duong" clearly distinguishable.

**FRANK DUONG**  
**PRIMARY EXAMINER**

February 17, 2006